

ABSTRACT

A pulsing apparatus for an electrical system includes line and neutral terminals structured to input a nominal alternating current line voltage, a timing mechanism or circuit for generating a timing signal having a duty cycle from the line  
5 voltage; a transformer for transforming the line voltage to a stepped up voltage having the duty cycle; load and load neutral terminals; and an output circuit for outputting a current at about the stepped up voltage to the load and load neutral terminals. The stepped up voltage is greater than the line voltage and less than a rated voltage of the electrical system. The stepped up voltage is adapted to identify an arcing fault in the  
10 electrical system. The duty cycle limits an average value of the current to less than about 4 mA to about 6 mA.